the incidence-based economic burden of asthma within lifetime horizon of around 16,193 billion VND. **CONCLUSIONS:** Understanding the economic impact of asthma on society is fundamental to plan and implement relevant medical policies. The high incidence-based economic burden of asthma of around 16,193 billion VND should be considered to conduct the health care policies in Vietnam.

PRS10

ECONOMIC BURDEN OF PEDIATRIC ATOPIC DERMATITIS IN ASIA-PACIFIC: A REVIEW OF THE LITERATURE

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OBJECTIVES: Atopic dermatitis (AD) is a chronic skin disease typically presenting in infancy. A literature review was conducted to identify pediatric AD cost estimates in Asia-Pacific (AP) countries. **METHODS:** An electronic literature search was conducted in PubMed, Google scholar, and Asian electronic reference databases to identify studies reporting on pediatric AD cost estimates in AP countries. Open text search terms were used to maximize the sensitivity of the search strategy. These searches were supplemented by manual reviews of bibliographies of the articles reporting cost estimates and discussions with AD experts. Costs were inflated and converted to 2013 US dollars. **RESULTS:** Annual AD costs per patient were identified in Australia (cross-sectional survey of 48 parents of AD children; age 4 months-15 years; total costs for all, mild, moderate, and severe cases: $2,745; $925; $3,301; $4,907, respectively; direct costs only: $1,400; $636; $1,577; $2,420, respectively), South Korea (cross-sectional survey of 196 parents of AD patients; age <12 years; visiting an allergy clinic; total: $3,522; direct: $1,253); Indonesia (model-based; age 0-6; urban; total: $743; direct: $740), Malaysia (model-based; age 0-6; urban; total: $576; direct: $398), Philippines (model-based; age 0-6; urban; total: $371; direct: $363), Singapore (model-based; age 0-6; urban; total: $1,097; direct: $957), and Thailand (model and chart review of 3,502 AD children; age 0-5; direct costs; all, mild, moderate, and severe AD: $199, $124 $415, $968, respectively). **CONCLUSIONS:** The economics of pediatric AD in AP has not been extensively studied. Based on available evidence, annual pediatric AD costs are generally high. Variations in cost estimates are due to between-study differences in country of analysis, types of costs included, severity of AD, and costing methodology. Further evaluations of the AD costs and the cost-effectiveness of pediatric AD prevention strategies in AP countries are warranted.

PRS11

BURDEN OF ATOPIC DERMATITIS IN INDONESIA, MALAYSIA, AND SINGAPORE: ESTIMATES FROM A MATHEMATICAL MODEL

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OBJECTIVES: Children with a family history of atopic disease receiving cow's milk formula (CMF) are at high risk of atopic dermatitis (AD). Modeling techniques were used to estimate the economic impact of AD among urban high-risk children in Malaysia, Indonesia, and Singapore. **METHODS:** A cohort Markov model was developed to simulate the cumulative incidence and costs of AD in 3 cohorts (one per country) of urban, high-risk infants partially of completely fed with CMF in early infancy (months 0-4). AD incidence was from the GINI study, the largest/longest prospective experimental study of infant formula and AD in this population. AD treatment patterns and resource use assumptions were dervided from expert opinion (n=8). Costing of resource use was based on the respective countries' prices. Key modeled outcomes included the overall and annual direct/indirect costs of AD (converted to 2013 US$) from diagnosis to age 6. Multivariate probabilistic sensitivity analysis was uses to generate 95% confidence intervals (CI) around study outcomes. **RESULTS:** The 6-year cumulative risk of AD was 38% (95% CI: 22%, 57%). The mean overall estimated AD costs/child developing AD was $2,492 (95% CI: $1,887, $3,509) in Malaysia, $3,217 (95% CI: $2,339, $4,717) in Indonesia, and $4,753 (95% CI: $3,438, $6,961) in Singapore. Expressed on an annual basis, the cost of AD per child developing AD was $576 (95% CI: $501, $650) in Malaysia, $743 (95% CI: $605, $876) in Indonesia, and $1,097 (95% CI: $900, $1,303) in Singapore. Most of these costs were direct costs for physician visits and pharmacologic treatments. **CONCLUSIONS:** By age 6, the total cumulative AD-related costs among high-risk urban infants who are fed with CMF in early infancy are estimated to range from $2,492 to $4,473. Annual AD costs range from $576 to $1,097. Cost-effective AD prevention strategies should be considered to reduce this burden.

PRS12

COMPARISON OF HEALTH CARE UTILIZATION AND COSTS FOR PATIENTS WITH ASTHMA BY SEVERITY AND HEALTH INSURANCE IN THAILAND: USING GENERALIZED LINEAR REGRESSION MODEL

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OBJECTIVES: Asthma is a major health care problem. Understanding current patterns of health care utilization is important. Several previous studies compared health care utilization and cost by severity and health insurance; however, they may not be applicable to Thailand. This study aimed to compare health care utilization and cost by asthma severity and type of health insurance in Thailand. **METHODS:** A retrospective study using an electronic database was conducted in patients with asthma who visited a University-affiliated hospital during 2009-2011. The outcomes were health care utilization and costs of in-patient and out-patient care. We compared outcomes between groups based on a proxy of severity (high vs. non-high risk of emergency department visit) and type of health insurance. Multivariable generalized linear regression model with log link function was used to determine the difference of average health care cost, while multivariable negative binomial regression model was used to determine difference of the number of hospitalization among groups of severity and health insurance. Costs were converted to $US using 30.59 Thai-baht per $1US. **RESULTS:** Among 1,982 patients included, the average age was 40.3±24.0 years with 60.7% male. A total of 1,936 patients were non-high risk patients, while 46 patients were high-risk patients. There were 1,293 patients under universal coverage schemes (UCS), 264 patients under social security schemes, and 626 patients under civil servant medical benefit schemes (CSMBS). The average annual cost/patient was $598±871. In adjusted analyses, the health care cost of high-risk patients was $67 higher than that of non-high risk patients (95% confidence interval (CI); $64–$69). The cost of patients under CSMBS was $109 (95%CI; $105-$113) higher than that of patients under UCS. **CONCLUSIONS:** The health care costs in a cohort of patients with asthma were substantial and were higher in high-risk patients and patients under CSMBS.

PRS13

MISSING DATA ANALYSIS IN LONGITUDINAL STUDIES: FINDINGS FROM A QUALITY OF LIFE STUDY IN MALAYSIAN TUBERCULOSIS PATIENTS

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OBJECTIVES: This study aims to propose an appropriate statistical method to analyse the longitudinal health-related quality of life (HRQoL) data. **METHODS:** This was a longitudinal HRQoL study conducted among new smear positive pulmonary tuberculosis (PTB) patients diagnosed at the chest clinic of Penang General Hospital between March 2010 and February 2011. Eligible patients (i.e., literate and 18 years and above) were asked to self-complete the SF-36v2 questionnaire (either in Malay, Mandarin, Tamil or English) at the start of the treatment, after the intensive phase and at the end of the treatment. The mean physical component summary (PCS) and mental component summary (MCS) scores, ranging from 47–53, were considered equivalent to the general population norms. Repeated measures ANOVA (with single imputations) and linear mixed model were used to analyse the data. **RESULTS:** A total of 216 patients completed the questionnaire at the start of their treatment. Out of these, 177 and 153 completed the questionnaire at the second and third follow-ups, respectively. Throughout the treatment, the mean PCS and MCS scores for the patients were less than 47. In repeated measures ANOVA analysis, level of education, diabetes, being alcoholic and cough with sputum were the significant predictors of PCS, whereas none of the covariates explained a significant variance in the MCS scores. In linear mixed model, ethnicity, marital status, being a smoker, productive cough and $\geq$ 3 TB-related symptoms were the significant predictors of PCS. Similarly, covariates such as ethnicity, hypertension, being a smoker, monthly income $\geq$ 1000 MYR and $\geq$ 3 TB-related symptoms significantly explained variance in the MCS scores. **CONCLUSIONS:** The study's findings indicated compromised health among the study participants even at the end of treatment. According to different findings obtained from both methods and the limited assumption in applying repeated measures ANOVA, linear mixed model was preferred to analyse this data.

PRS14

HEALTH CARE UTILIZATION AND COST OF MANAGEMENT IN PATIENTS WITH STEVENS-JOHNSON SYNDROME AND TOXIC EPIDERMAL NECROLYSIS IN THAILAND

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OBJECTIVES: Stevens - Johnson syndrome (SJS) and Toxic Epidermal Necrolysis (TEN) are two forms of life-threatening dermatologic condition. The syndromes are very severe. They require lots of health care resource. However, there is little information about health care resource utilization and cost of managing SJS/TEN. Thus, this study aimed to quantify health care use and cost of managing this syndrome in Thailand. **METHODS:** A retrospective study using an electronic health database from a 1000 bed- university-affiliated hospital in Thailand was undertaken. Patients who were admitted with SJS/TEN from 2002 to 2007 were included. The cost was determined using the ratio of cost-to-charge of the hospital for each year. The cost was converted to 2013 value by consumer price index. The cost was converted to US$ using 32.97 Thai-baht per 1 US$. **RESULTS:** A total of 157 patients were included with 56.1% of male. Average age of the patients was 45.3±23.0 years. Of those patients, 118 patients were primarily diagnosed as SJS/TEN, while 39 patients were secondarily diagnosed as SJS/TEN. About 146 patients (93.0%) were diagnosed as SJS and the rest of them were diagnosed as TEN. The average length of stay (LOS) was 10.1±13.2 days for all patients. The LOS for primarily diagnosed patients was 6.8±4.8 days, while the LOS for secondarily diagnosed patients was 20.2±22.5 days. Most of patients (93.0%) were treated with systemic corticosteroids. Prednisolone was commonly used as an oral medication, while dexamethasone was usually used as an inject medication. The average cost of managing SJS/TEN for all patients was $1,012±2,563. The median cost was $342 (min-max; $11-$26,345). The average cost for primarily diagnosed patients was $519±724, while that for secondarily diagnosed patients was $2,536±4,713. **CONCLUSIONS:** Health care utilization and cost of managing SJS/TEN in Thailand were substantial. Policy makers may consider allocating resources to support the development of strategies to minimize preventable SJS/TEN.

PRS15

COST-BENEFIT ANALYSIS OF BACTERIAL LYSATES FOR CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN CHINA

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